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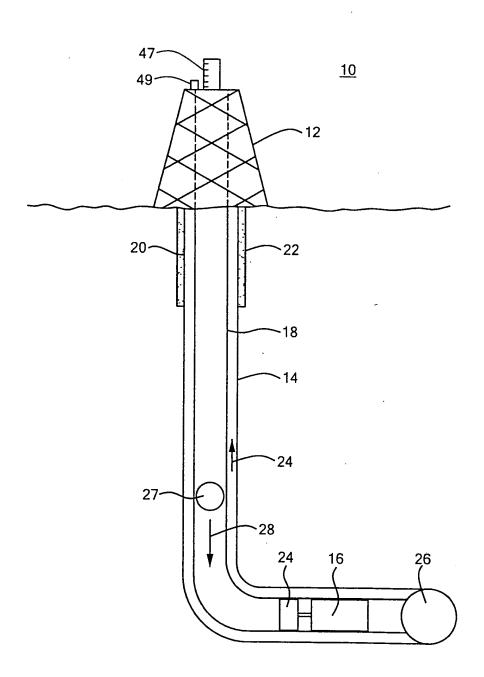
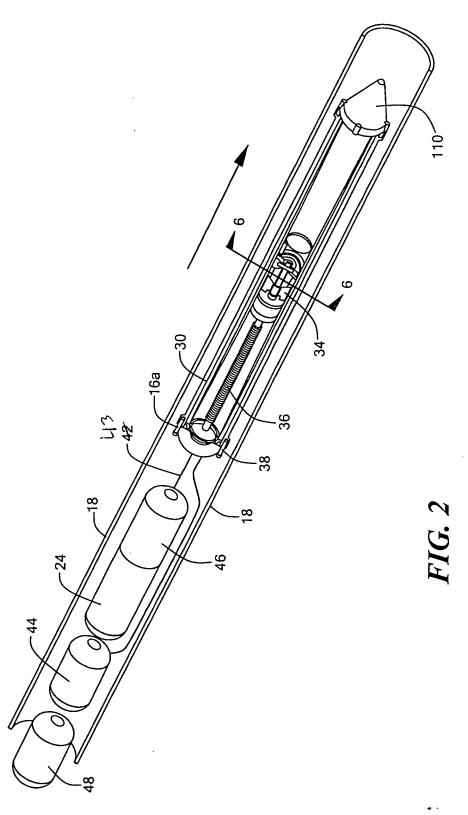


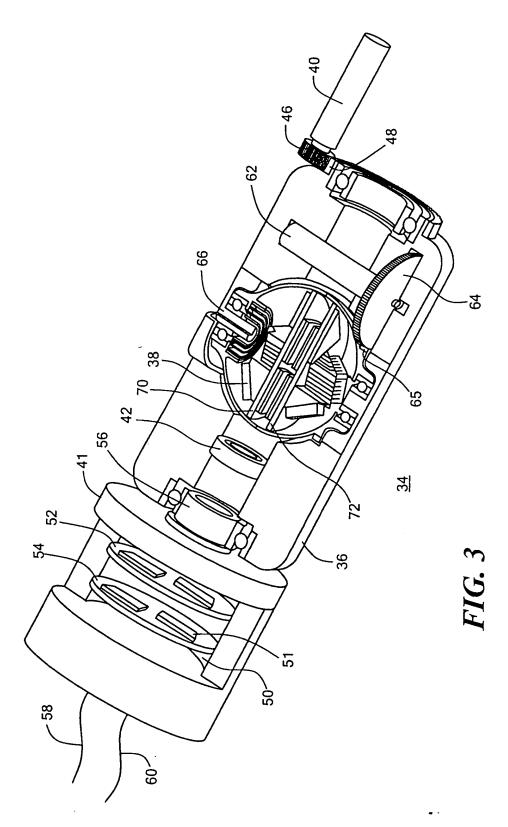
FIG. 1

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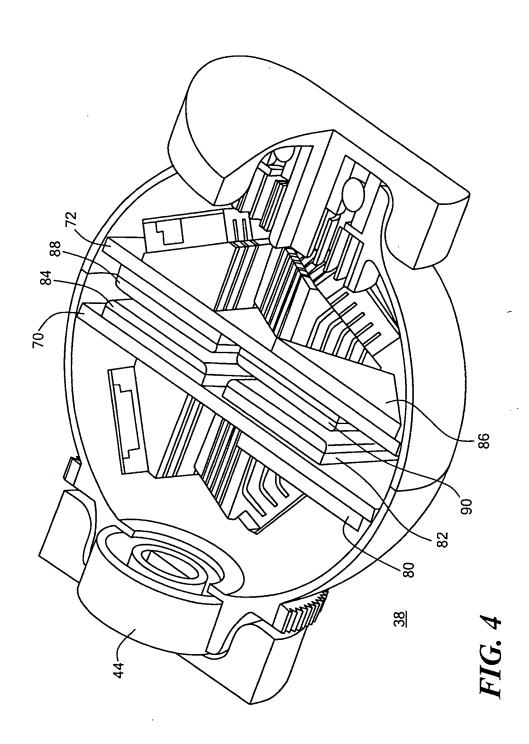
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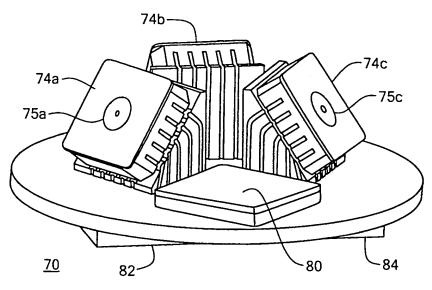


AND METHOD

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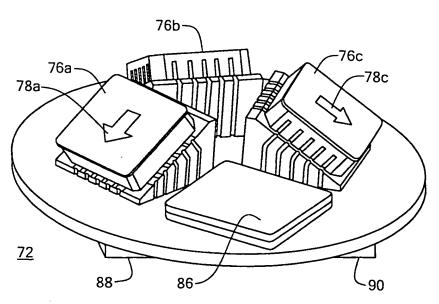
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Accel Board Assembly

FIG. 5A



Gyro Board Assembly

FIG. 5B

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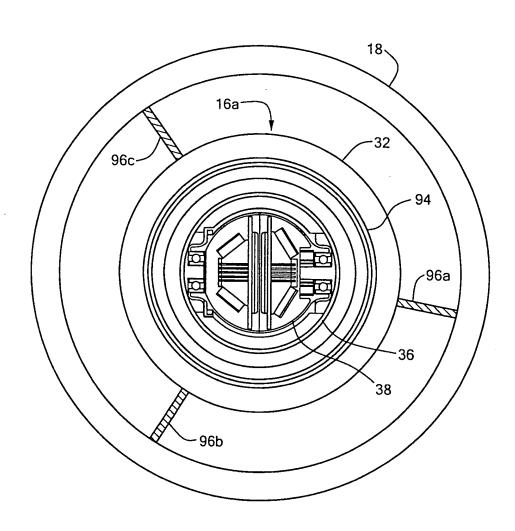


FIG. 6

Applicants: Ash et al.
Title: COMPACT NAVIGATION SYSTEM
AND METHOD Serial No: Docket No.: DR-365J Atty: David W. Poirier Reg. No.: 43,007 7 of 15 7/10 100 On/Off Mode Select Position Attitude Health Data Store Topside Operator Station Downhole Support Systems Mud Pulse Comm. Generator Downhole Power 24 44 - 54 Power Control & Conditioner Temp. Controller Processor Battery Control 51 Temp. Sensor TE Cooler Voltages Motor Resol. Navigator Package 62. 36a 116 39 32a Resolver Motor A/D ASIC FPGA Heater 114) . 1 112 76a-76c -Gyros Accels Temp. 74a-74c 38a 52

FIG. 7

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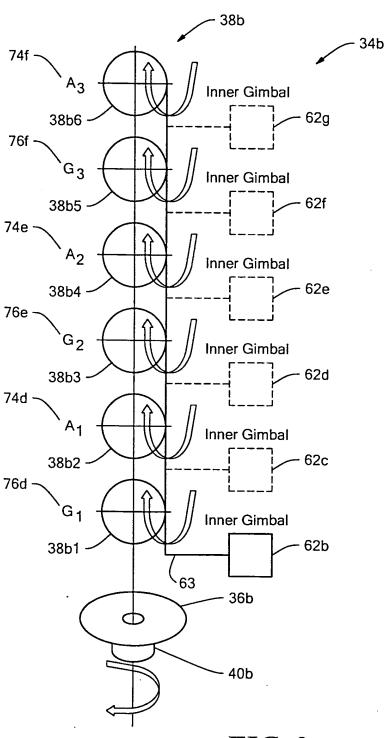
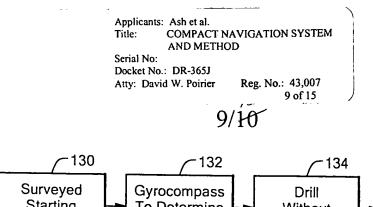
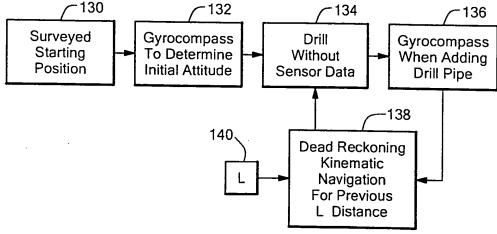


FIG. 8





DEAD RECKONING FOR KINEMATIC NAVIGATION WHILE DRILLING BETWEEN GYROCOMPASSES

FIG. 9

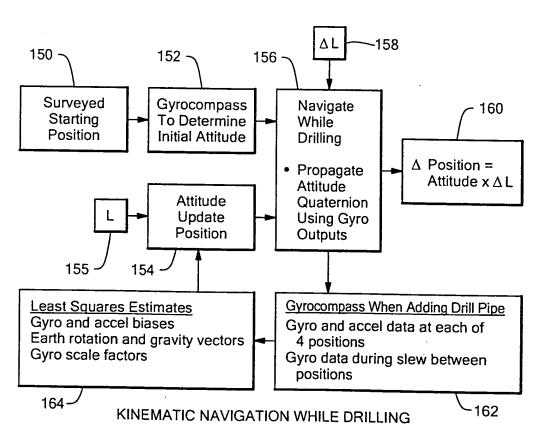


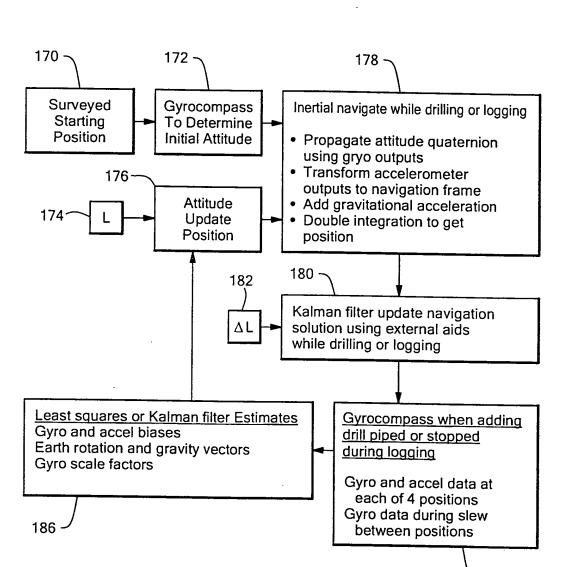
FIG. 10

Applicants: Ash et al.

Title: COMPACT NAVIGATION SYSTEM
AND METHOD

Serial No: Docket No.: DR-365J
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INERTIAL NAVIGATION WHILE DRILLING OR LOGGING

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FIG. 11

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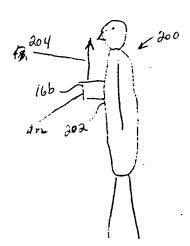
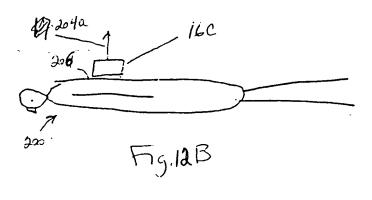
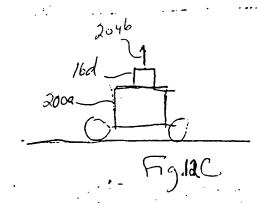
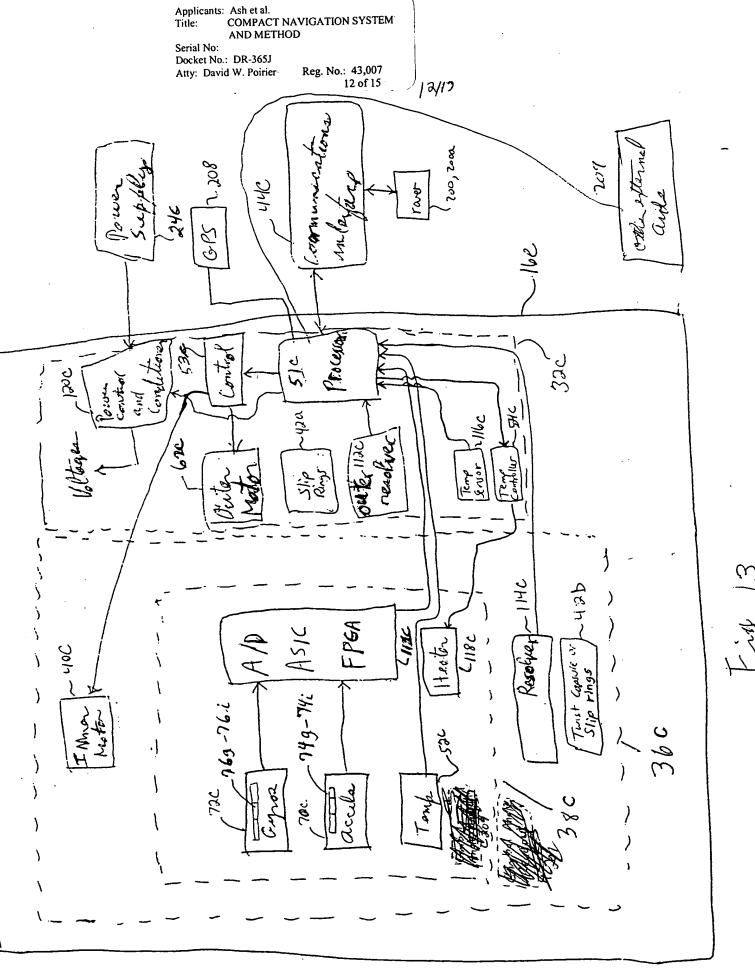


Fig. 12A





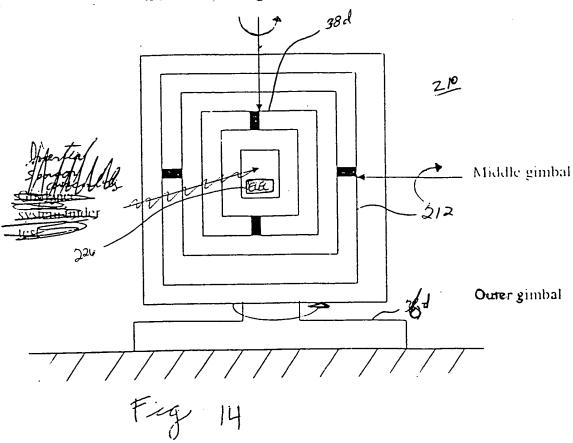


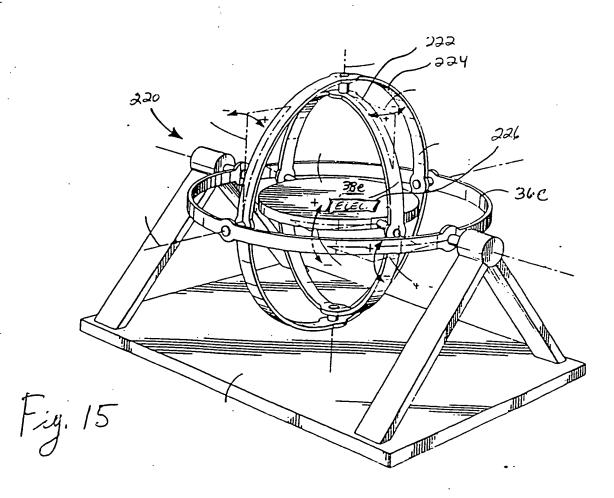
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Innergimbal





Applicants: Ash et al.

Title: COMPACT NAVIGATION SYSTEM AND METHOD Serial No: Docket No.: DR-365J 14/15 Reg. No.: 43,007 14 of 15 Atty: David W. Poirier FPGA

